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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/123,253	07/27/1998	T. WILLIAM HUTCHENS	D-5639-C4	5339

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EXAMINER

ALEXANDER, LYLE

ART UNIT

PAPER NUMBER

1743

DATE MAILED: 04/30/2003

27

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/123,253

Applicant(s)

HUTCHENS ET AL.

Examiner

Lyle A Alexander

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☒ Claim(s) 51, 53, 88 and 89 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Continuation of Disposition of Claims: Claims pending in the application are 49-53,56,57,60,61,63-71,75,76,79,80,82,83,86-91,94,95,98,99,101,105-113 and 120-148.

Continuation of Disposition of Claims: Claims rejected are 49,50,52,56,57,60,61,63-71,75,76,79,80,82,83,86,87,89-91,94,95,98,99,101,105-113 and 120-148.

Art Unit: 1743

In light of the 11/08/03 amendments a further search was made and new references were found. The Office found Applicants' remarks concerning the rejections over Benninghoven and Van Breemen et al. convincing and these two rejections have been vacated.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 49, 64, 67-71, 80, 86, 126-127, 129, 136, 143 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Cerami (USP 4,665,192).

Cerami teaches in column 11 lines 48+ a mass spectrometry apparatus using a ceramic probe tip to present the sample.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 49-50, 52, 56-57, 63-67, 69-71, 75-76, 82, 86-87, 90-91, 94-95, 101, 105-127, 130-134, 137-141 and 144-148 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 3221681 (note the attached translation of the document) or Cottrell et al.

Art Unit: 1743

DE 3221681 teaches a method and apparatus for using a laser to desorb a biological sample from a polymer film further subjecting the desorbed sample to mass spectrometry analysis.

Cottrell et al. teach a method and apparatus for laser desorption mass spectrometry of a sample on a polyacrylamide gel.

DE 3221681 is silent to the type of polymer used and if the material is open or closed pore. Similarly, Cottrell et al. is silent to the claimed polymers and if the material is open or closed pore.

The court decided In re Leshin (125 USPQ 416) that mere selection of known plastic being on the basis of suitability for the intended use would be entirely obvious. The claimed polystyrene, polypropylene, polycarbonate, nylon and dextran as well as the porosity of these polymers are all well known polymeric materials in the art commonly used in biological assays because of inertness, light weight, high strength, low cost of manufacture and ease of disposal (e.g. all these materials can be readily incinerated). Open pores are advantageous better retain the sample while closed pores have the advantage of leaving more of the sample available to analysis.

It would have been within the skill of the art to modify DE 3221681 or Cottrell et al. and use polymeric materials such as polystyrene, polypropylene, polycarbonate, nylon and dextran as well as selecting the relative porosity (e.g. open/closed pores) to gain the above advantages and as selection of a material based upon its suitability of intended use.

Art Unit: 1743

Claims 50,52,56-57,60-61,63,75-79,82-83,87-99, 101,105-125,128-129, 135, and 142 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cerami in view of Stuke (USP 4,686,366).

See Cerami supra.

Cerami is silent to the claimed use of laser desorption of the sample, the use of glass and their relative porosity (e.g. open/closed pore) of either the taught ceramic or glass.

Stuke teaches in column 1 lines 37+ that mass spectrometry analysis may fragment samples. It is advantageous to use a laser to desorb the sample to supply the mass spectrometer with large intact analytes.

It would have been within the skill of the art to modify Cerami in view of Stuke and use a laser to desorb the samples to gain the above advantages.

The court decided In re Leshin (125 USPQ 416) that mere selection of known materials being on the basis of suitability for the intended use would be entirely obvious. Cerami teaches use of a ceramic material which is silicon based. It would have been within the skill of the art to use other well known silicon based materials such as glass. Glass as well as its relative porosity is a well known in the art as commonly used in biological assays because of inertness, light weight, high strength, low cost of manufacture and ease of disposal (e.g. all these materials can be readily incinerated). Open pores are advantageous better retain the sample while closed pores have the advantage of leaving more of the sample available to analysis.

Art Unit: 1743

It would have been within the skill of the art to modify Cerami in view of Stuke and glass in stead of the taught ceramic as well as selecting the relative porosity (e.g. open/closed pores) to gain the above advantages and as selection of a material based upon its suitability of intended use.

### ***Allowable Subject Matter***

Claims 51,53,88 and 89 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The cited prior art fails to teach a method of laser desorption mass spectrometry where the sample is further modified while on the probe.

### ***Response to Arguments***

Applicant's arguments, see paper 23 , filed 11/8/03, with respect to the rejection(s) of the claim(s) over Benninghoven and Van Breemen et al. have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration of the 11/8/02 amendments , a further search was made to address the new limitations and the above new ground(s) of rejection were made in response.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 1743

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lyle A Alexander whose telephone number is 703-308-3893. The examiner can normally be reached on Monday, Wednesday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 703-308-4037. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9319 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

Lyle A Alexander  
Primary Examiner  
Art Unit 1743

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April 21, 2003

